

## ABSTRACT

Disclosed herein is a constrained multipath routing method. In a Multi-Protocol Label Switching (MPLS) network,  
5 network conditions and traffic engineering requirements assigned to each link are set. The amount of assignments of each traffic requirement assigned to each link and a minimum value of each maximum link utilization  $\alpha$  are calculated. A traffic rate  $(X_{ij}^{kl})$  in which the degree of resource  
10 utilization is minimized in the minimized maximum link utilization  $\alpha$  is calculated using the calculated amount of assignments of each traffic requirement and which is assigned to each link. Multiple paths corresponding to each traffic requirement and traffic division ratios of the multipath are  
15 calculated using the calculated traffic rate.